VOLUME 41

CONTENTS

NUMBER 1

	i	ISE pages
E. FONTES, M. FONTES and D. SIMONSSON	1	Effects of different design parameters on the performance of MCFC cathodes
Y. MATSUO and T. NAKAJIMA	15	Electrochemical properties of fluorinated fullerene C_{60}
C. ARBIZZANI, M. MASTRAGOSTINO and L. MENEGHELLO	21	Polymer-based redox supercapacitors: a comparative study
P. FERLONI, M. MASTRAGOSTINO and L. MENEGHELLO	27	Impedance analysis of electronically conducting polymers
A. GOOSSENS, M. VAZQUEZ and D. D. MACDONALD	35	The nature of electronic states in anodic zirconium oxide films part 1: the potential distribution
A. GOOSSENS, M. VAZQUEZ and D. D. MACDONALD	47	The nature of electronic states in anodic zirconium oxide films part 2: photoelectrochemical characterization
J.-D. KIM, S.-I. PYUN and R. A. ORIANI	57	Effects of chloride ion and applied current density on the stress generation during anodic oxidation of tungsten in 0.1 M H_2SO_4 solution
M. HEPEL	63	Composite polypyrrole films switchable between the anion- and cation-exchanger states
YONGCHENG LIU, HAIYING LIU, JIANGHONG QIAN, JIAQI DENG and TONGYIN YU	77	Feature of an amperometric ferrocyanide-mediating H_2O_2 sensor for organic-phase assay based on regenerated silk fibroin as immobilization matrix for peroxidase
C. CACHET, C. REROLLE and R. WIART	83	Kinetics of Pb and Pb–Ag anodes for zinc electrowinning—II. Oxygen evolution at high polarization
M. C. BERNARD, P. BERNARD, M. KEDDAM, S. SENYARICH and H. TAKENOUTI	91	Characterisation of new nickel hydroxides during the transformation of α $Ni(OH)_2$ to β $Ni(OH)_2$ by ageing
P. M. VEREECKEN, F. V. KERCHOVE and W. P. GOMES	95	Electrochemical behaviour of (1 0 0) GaAs in copper(II)-containing solutions
E. A. MEULENKAMP and A. R. DE WIT	109	Suppression of hole injection from Ce^{4+} and $Fe(CN)_6^{3-}$ at *p*-Type semiconductors by illumination
C. IWAKURA, T. OURA, H. INOUE and M. MATSUOKA	117	Effects of substitution with foreign metals on the crystallographic, thermodynamic and electrochemical properties of AB_5-type hydrogen storage alloys
L. SAWTSCHENKO, K. JOBST, A. NEUDECK and L. DUNSCH	123	Electrochemical and spectroelectrochemical studies of dihydrotetra-azapentacene as a model of polyazaacene
I. PARDO, M. ANGULO, R. M. GALVÍN and J. M. R. MELLADO	133	Electrochemical oxidation of 2-mercaptopyridine N-oxide on mercury electrodes in aqueous solutions
P. CLAES, B. THIRION and J. GLIBERT	141	Solubility of CO_2 in the molten NA_2CO_3—K_2CO_3 (42 mol %) eutectic mixture at 800°C

D. Sazou and C. Georgolios	147	Morphological surface changes of the Fe electrodissolution in 2 M H_2SO_4 during bursting oscillations induced by Br^-
H. G. Hertz and S. K. Ratkje	159	Electrokinetic effects by the electric work method
E. Brendler, S. K. Ratkje and H. G. Hertz	169	Streaming potentials of Nuclepore membranes by the electric work method
Guo Dong Zheng, Yan Yan, Sai Gao, Shan Ling Tong, De Gao and Kai Ji Zhen	177	The reaction mechanism of alkyl halides with carbon dioxide catalyzed by 5,10,15,20,-tetraphenyl porphyrin cobalt (CoTPP)
	183	Future Special Issues
	185	Papers in Press
	189	Electrochemical Calendar
	191	Books received
	I	Guide to Authors

NUMBER 2

	i	ISE pages
J.-T. Wang, R. F. Savinell, J. Wainright, M. Litt and H. Yu	193	A H_2/O_2 fuel cell using acid doped polybenzimidazole as polymer electrolyte
M. Y. Saïdi, J. Barker and R. Koksbang	199	Structural and electrochemical investigation of lithium insertion in the $Li_{1-x}Mn_2O_4$ spinel phase
K. K. Kasem	205	Electrochemical behavior of sodium 12-tungstodicobaltoate in aqueous and mixed solvent electrolytes
T. F. Otero and V. Olazábal	213	Electrogeneration of polypyrrole in presence of polyvinylsulphonate. Kinetic study
J.-H. Ye and P. S. Fedkiw	221	Electrodeposition of high-surface area platinum in a well adherent nafion film on glassy carbon
U. Scharf and E. W. Grabner	233	Electrocatalytic oxidation of hydrazine at a prussian blue-modified glassy carbon electrode
M. Ishibashi, M. Itoh, H. Nishihara and K. Aramaki	241	Permeability of alkanethiol self-assembled monolayers adsorbed on copper electrodes to molecular oxygen dissolved in 0.5 M Na_2SO_4 solution
K. Miura, A. Yamada and M. Tanaka	249	Electric states of spinel $Li_xMn_2O_4$ as a cathode of the rechargeable battery
S. Preusser and U. Stimming	257	The study and modification of oxide surfaces using focussed laser pulses
A. A. Kamnev	267	The role of lithium in preventing the detrimental effect of iron on alkaline battery nickel hydroxide electrode: a mechanistic aspect
A. Durant, H. François, J. Reisse and A. Kirsch-DeMesmaeker	277	Sonoelectrochemistry: the effects of ultrasound on organic electrochemical reduction
A. A. Moya and J. Horno	285	Simulation of nonstationary diffusion-migration processes in electrochemical cells using the network method
M. M. Gómez, A. Arevalillo and J. M. Vara	291	Specific adsorption of potassium penicillin G on mercury electrode

J. SABA 297 Description of the mixed polyethyleneglycoles–thiourea adsorption layer on a mercury electrode and its effect on the electroreduction of zinc (II)

A. GAMEZ, D. RICHARD, P. GALLEZOT, F. GLOAGUEN, R. FAURE and R. DURAND 307 Oxygen reduction on well-defined platinum nanoparticles inside recast ionomer

R. G. COMPTON, J. C. EKLUND, F. MARKEN and D. N. WALLER 315 Electrode processes at the surfaces of sonotrodes

Y. YANG, X. G. CHEN and Z. G. LIN 321 Distribution and laser-induced behavior of lead monooxide on lead electrodes in acid solution

E. MICHAILOVA, A. MILCHEV and R. LACMANN 329 Electrochemical growth of single metal and alloy clusters—III. Potentiostatic conditions: experimental

E. T. HAYES, B. K. BELLINGHAM, H. B. MARK, JR and A. GALAL 337 An amperometric aqueous ethanol sensor based on the electrocatalytic oxidation at a cobalt–nickel oxide electrode

Short Communication
H. TSUTSUMI, H. DOI and T. OISHI 345 Conductivity enhancement of polymer gel containing surfactant

349 Future Special Issues

351 Papers in Press

353 Electrochemical Calendar

357 Books received

NUMBER 3

i ISE pages

P. MANOLATOS and M. JEROME 359 A thin palladium coating on iron for hydrogen permeation studies

T. TJÄRNHAGE, B. SKÅRMAN, B. LINDHOLM-SETHSON and M. SHARP 367 Electrochemical quartz crystal microbalance studies of thin poly(4-vinylpyridine) films containing $IrCl_6^{2-/3-}$ redox sites

P. PARMANANDA 377 Controlling chaos in a model for an electrochemical oscillator using a map-based algorithm

GUANGLI CHE and SHAOJUN DONG 381 Kinetics of electrocatalytic ascorbic acid at ultramicroelectrode modified by Eastman–AQ polymer containing tris(2,2′-bipyridine) osmium(III/II) complexes as electron-transfer centers

H. G. ZHANG, J. A. DOYLE, C. C. KENNA, S. R. LA BROOY, G. T. HEFTER and I. M. RITCHIE 389 A kinetic and electrochemical study of the cementation of gold onto mild steel from acidic thiourea solutions

N. GIORDANO, P. STAITI, S. HOCEVAR and A. S. ARICÒ 397 High performance fuel cell based on phosphotungstic acid as proton conducting electrolyte

T. LOUČKA and P. JANOŠ 405 Adsorption and oxidation of thiocyanate on a platinum electrode

K. E. HEUSLER 411 Multicomponent electrodes

O. R. CAMARA and S. TRASATTI 419 Surface electrochemical properties of $Ti/(RuO_2 + ZrO_2)$ electrodes

A. SRHIRI, M. ETMAN and F. DABOSI 429 Electro and physicochemical study of corrosion inhibition of carbon steel in 3% NaCl by alkylimidazoles

Y. YAMAMOTO, M. MATSUOKA, M. KIMOTO, M. UEMURA and C. IWAKURA	439	Potentiodynamic reactivation of a passivated lead negative electrode in sulphuric acid solution
L. P. LOSSIUS and F. EMMENEGGER	445	Plating of magnesium from organic solvents
A. D. JANNAKOUDAKIS, P. D. JANNAKOUDAKIS, N. PAGALOS, E. THEODORIDOU and J. O. BESENHARD	449	Preparation and behaviour of acetylene black press-electrodes as adsorbents and metal catalysts supports
C. A. GERVASI, J. R. VILCHE and P. E. ALVAREZ	455	A transition in the kinetics of electroreduction of anodically formed cobalt oxides. Influence of potentiostatic ageing
V. L. CHERGINETS, E. G. KHAILOVA and O. V. DEMIRSKAYA	463	On the solubilities of metal oxides in ionic melt 2 CsBr · KBr at 700°C
Short Communications		
V. JOUIKOV and L. GRIGORIEVA	469	Electrochemically induced silylation of unsaturated compounds
C. IWAKURA, S. HAZUI and H. INOUE	471	Effect of temperature on electrochemical characteristics of Mg_2Ni alloy
O. ENEA	473	A porous cell for photo-assisted electro-oxidations in the gas-phase
	477	Future Special Issues
	479	Papers in Press
	481	Electrochemical Calendar
	485	Books Received

NUMBER 4

	i	ISE pages
K. SCOTT	487	Editorial
S. DONNELLY, J. GRIMSHAW and J. TROCHA-GRIMSHAW	489	Cyclizations. Part 3. Use of a mild-steel cathode in the electrochemical intramolecular cyclization of aryl halides
P. TRINIDAD and F. C. WALSH	493	Hydrodynamic behaviour of the FM01-LC reactor
E. HEITZ	503	Mechanistically based prevention strategies of flow-induced corrosion
C. EHRENBECK and K. JÜTTNER	511	Development of an anion/cation permeable free-standing membrane based on electrochemical switching of polypyrrole
T. DOHERTY, J. G. SUNDERLAND, E. P. L. ROBERTS and D. J. PICKETT	519	An improved model of potential and current distribution within a flow-through porous electrode
S. M. KULIKOV, V. P. PLEKHANOV, A. I. TSYGANOK, C. SCHLIMM and E. HEITZ	527	Electrochemical reductive dechlorination of chlororganic compounds on carbon cloth and metal-modified carbon cloth cathodes
C. PONCE DE LEON and D. PLETCHER	533	The removal of Pb(II) from aqueous solutions using a reticulated vitreous carbon cathode cell—the influence of the electrolyte medium
W. M. TAAMA, R. E. PLIMLEY and K. SCOTT	543	Mass transfer rates in a DEM electrochemical cell

W. M. Taama, R. E. Plimley and K. Scott	549	Influence of supporting electrolyte on ferricyanide reduction at a rotating disc electrode
J. Jörissen	553	Ion exchange membranes as solid polymer electrolytes (*spe*) in electro-organic syntheses without supporting electrolytes
I. Cservenyák, G. H. Kelsall and W. Wang	563	Reduction of Ti^{IV} species in aqueous sulfuric and hydrochloric acids I. Titanium speciation
I. Cservenyák, G. H. Kelsall and W. Wang	573	Reduction of Ti^{IV} species in aqueous hydrochloric and sulfuric acids II. ECE model of the behaviour in sulfate media
K. Bouzek, J. Palmer, I. Rousar and A. A. Wragg	583	Mass transfer to wall electrodes in a fluidised bed of inert particles
T. R. Ralph, M. L. Hitchman, J. P. Millington and F. C. Walsh	591	Mass transport in an electrochemical laboratory filterpress reactor and its enhancement by turbulence promoters
D. R. Hodgson	605	Application of electrochemical noise and *in situ* microscopy to the study of bubble evolution on chlorine evolving anodes
	611	Future Special Issues
	613	Papers in Press
	615	Electrochemical Calendar
	619	Books received

NUMBER 5

SPECIAL ISSUE

INFRARED SPECTROSCOPY IN ELECTROCHEMISTRY

	i	ISE pages
T. Iwasita	621	Editorial
D. K. Lambert	623	Vibrational Stark effect of adsorbates at electrochemical interfaces
F. C. Nart and T. Iwasita	631	Static field effect on the band intensity of adsorbed sulfate ions
A. E. Russell, L. Rubasingham, P. L. Hagans and T. H. Ballinger	637	Cell and optics design for *in situ* far-infrared spectroscopy of electrode surfaces
N. S. Marinković, M. Hecht, J. S. Loring and W. R. Fawcett	641	A SNIFTIRS study of the diffuse double layer at single crystal platinum electrodes in acetonitrile
M. Weber and F. C. Nart	653	On the adsorption of ionic phosphate species on Au(111)—an *in situ* FTIR study
I. Villegas and M. J. Weaver	661	Progressive cation solvation at Pt(111) model electrochemical interfaces in ultrahigh vacuum as probed by infrared spectroscopy and work-function measurements
J. Rappich and H. J. Lewerenz	675	*In situ* FTIR investigation of the electrochemical microstructuring of *n*-Si(111)
M. Nakamura, M.-B. Song and M. Ito	681	Etching processing of Si(111) and Si(100) surfaces in an ammonium fluoride solution investigated by *in situ* ATR–IR
F. Ozanam, A. Djebri and J.-N. Chazalviel	687	The hydrogenated silicon surface in organic electrolytes probed through *in situ ir* spectroscopy in the ATR geometry

SHI-GANG SUN and YAN LIN	693	*In situ* FTIR spectroscopic investigations of reaction mechanism of isopropanol oxidation on platinum single crystal electrodes
B. BEDEN, F. LARGEAUD, K. B. KOKOH and C. LAMY	701	Fourier transform infrared reflectance spectroscopic investigation of the electrocatalytic oxidation of D-glucose: identification of reactive intermediates and reaction products
X. H. XIA, T. IWASITA, F. GE and W. VIELSTICH	711	Structural effects and reactivity in methanol oxidation on polycrystalline and single crystal platinum
K. SHAW, P. CHRISTENSEN and A. HAMNETT	719	Photoelectrochemical oxidation of organics on single-crystal TiO_2: an *in situ* FTIR study
A. RODES, R. GÓMEZ, J. M. PÉREZ, J. M. FELIU and A. ALDAZ	729	On the voltammetric and spectroscopic characterization of nitric oxide adlayers formed from nitrous acid on Pt(h,k,l) and Rh(h,k,l) electrodes
D. AURBACH, O. CHUSID, I. WEISSMAN and P. DAN	747	$LiC(SO_2CF_3)_3$, a new salt for Li battery systems. A comparative study of Li and non-active metal electrodes in its ethereal solutions using *in situ* FTIR spectroscopy
A. ARAMATA, S. TERUI, S. TAGUCHI, T. KAWAGUCHI and K. SHIMAZU	761	Underpotential deposition of zinc ions on polycrystalline platinum: FTIR and EQCM study
Z. PING, H. NEUGEBAUER and A. NECKEL	767	FTIR ATR spectroelectrochemical investigations of polyaniline with perrhenate as a new doping system
	773	Future Special Issues
	775	Papers in Press
	777	Electrochemical Calendar
	781	Books Received

NUMBER 6

	i	ISE pages
E. SIKORA, J. SIKORA and D. D. MACDONALD	783	A new method for estimating the diffusivities of vacancies in passive films
A. KOLICS and G. HORÁNYI	791	Some considerations about the applicability of the *in situ* radiotracer "foil" method for the study of accumulation processes on compact stainless steel electrodes—I. Measurement of β-radiation
WEN-FENG LIN and SHI-GANG SUN	803	*In situ* FTIRS investigations of surface processes of Rh electrode—novel observation of geminal adsorbates of carbon monoxide on Rh electrode in acid solution
M. A. BALDO, S. DANIELE and G. A. MAZZOCCHIN	811	Cyclic voltammetry at mercury microelectrodes. Effects of mercury thickness and scan rate
M. SÁNCHEZ-MAESTRE, R. RODRÍGUEZ-AMARO, E. MUÑOZ, J. J. RUIZ and L. CAMACHO	819	The cyclic voltammetric behaviour of 4,4′-bipyridine over mercury in an acid medium
SHIXIONG JIN and SIYU YE	827	Oxygen evolution on titanium anodes coated with conductive metallic oxides: Kinetics and mechanism in alkaline solution
J. J. GARCÍA-JAREÑO, J. NAVARRO-LABOULAIS and F. VICENTE	835	Charge transport in Prussian Blue films deposited on ITO electrodes

TAE-HYUN YANG and SU-IL PYUN	843	Hydrogen absorption and diffusion into and in palladium: *ac*-impedance analysis under impermeable boundary conditions
UN-SICK PARK, YOUNG-JIN HONG and SEUNG M. OH	849	Fluorescence spectroscopy for local viscosity measurements in polyacrylonitrile (PAN)-based polymer gel electrolytes
M. EGUCHI, A. KOMAMURA, T. MIURA and T. KISHI	857	Lithiation characteristics of $Cu_5V_2O_{10}$
S. KUDELKA, A. MICHAELIS and J. W. SCHULTZE	863	Effect of texture and formation rate on ionic and electronic properties of passive layers on Ti single crystals
R. ERIKSSON	871	A study of the PBD-technique using the copper refining cell as a model system
S. JAYASEKERA, J. AVRAAMIDES and I. M. RITCHIE	879	The electrochemical oxidation of gold telluride ($AuTe_2$) in perchloric acid solutions
XIN ZHAO, WENRUI JIN and YAN WANG	887	Investigations on bioanalytical chemistry—VII: Reaction mechanism of the Cu(II)–adenine system in Na_2HPO_4 + citric acid buffer
BAOXING WANG and SHAOJUN DONG	895	Electrochemical study of isopoly- and heteropoly-oxometallates film modified microelectrodes—VI. Preparation and redox properties of 12-molybdophosphoric acid and 12-molybdosilicic acid modified carbon fiber microelectrodes
M. ABRAHAM, M.-C. ABRAHAM and I. ZIOGAS	903	Activation parameters for the electrical conductivity of mixed nitrate–water systems, from fused salts to dilute solutions
F. NICOLAS, H. GROULT, D. DEVILLIERS and M. CHEMLA	911	Influence of bubble adherence on the kinetics of the fluorine evolution process
SU-IL PYUN and JOON-SUNG BAE	919	The *ac* impedance study of electrochemical lithium intercalation into porous vanadium oxide electrode
P. OLIVI, L. O. S. BULHÕES, J.-M. LÉGER, F. HAHN, B. BEDEN and C. LAMY	927	The electrooxidation of formaldehyde on Pt(100) and Pt(110) electrodes in perchloric acid solutions
Short Communications		
F. BECK, G. TOM SUDEN, U. TORMIN and T. BOINOWITZ	933	Thin inert bipolar electrodes fabricated from carbon black filled polypropylene
H. INOUE, S. ARAI and C. IWAKURA	937	Crystallographic and electrochemical characterization of $TiV_{4-x}Ni_x$ alloys for nickel–metal hydride batteries
K. SCOTT	941	*Electro-osmosis.* Edited by K. P. TIKKOMOLOUA
	943	Future Special Issues
	945	Papers in Press
	947	Electrochemical Calendar
	951	Books Received
		NUMBERS 7/8
	i	ISE pages
J. VEREECKEN	953	Editorial
PLENARY SESSION		
C. GABRIELLI and M. KEDDAM	957	Contribution of electrochemical impedance spectroscopy to the investigation of the electrochemical kinetics

W. P. Gomes and D. Vanmaekelbergh 967 Impedance spectroscopy at semiconductor electrodes: Review and recent developments

INSTRUMENTATION — DATA PROCESSING

P. T. Wojcik, P. Agarwal and M. E. Orazem 977 A method for maintaining a constant potential variation during galvanostatic regulation of electrochemical impedance measurements

A. S. Baranski and A. Szulborska 985 High frequency impedance measurements at ultramicroelectrodes

J. R. Dygas and M. W. Breiter 993 Measurements of large impedances in a wide temperature and frequency range

J. Fleig and J. Maier 1003 Finite element calculations of impedance effects at point contacts

J. Jamnik, J. Maier and S. Pejovnik 1011 A new penetration impedance technique

P. Agarwal, M. E. Orazem and L. H. Garcia-Rubio 1017 The influence of error structure on interpretation of impedance spectra

G. S. Popkirov 1023 Fast time-resolved electrochemical impedance spectroscopy for investigations under nonstationary conditions

ELECTROCHEMICAL KINETICS

R. Ichino, C. Cachet and R. Wiart 1031 Mechanism of zinc electrodeposition in acidic sulfate electrolytes containing Pb^{2+} ions

F. J. Fabri Miranda, O. E. Barcia, S. L. Diaz, O. R. Mattos and R. Wiart 1041 Electrodeposition of Zn–Ni alloys in sulfate electrolytes

D. Gonnissen, S. Vandeputte, A. Hubin and J. Vereecken 1051 Investigation of the mechanism of silver deposition from thiosulphate solutions by means of *ac* impedance measurements and surface-enhanced Raman spectroscopy

A. Nishikata, Y. Ichihara and T. Tsuru 1057 Electrochemical impedance spectroscopy of metals covered with a thin electrolyte layer

C. Rerolle and R. Wiart 1063 Kinetics of oxygen evolution on Pb and Pb–Ag anodes during zinc electrowinning

ORGANIC FILMS

P. L. Bonora, F. Deflorian and L. Fedrizzi 1073 Electrochemical impedance spectroscopy as a tool for investigating underpaint corrosion

F. Beck and U. A. Krüger 1083 EIS of cathodically deposited wet paint films prior to the stoving process

H. Katayama, K. Yagi, A. Nishikata and T. Tsuru 1093 Impedance characteristics of organic-coated stainless steels with a macroscopic defect

G. G. do Nascimento, J. L. C. dos Santos, I. C. P. Margarit and O. R. Mattos 1099 Lacquered tinplate: Corrosion resistance in the function of lacquering conditions

D. H. van der Weijde, E. P. M. van Westing and J. H. W. de Wit 1103 EIS measurements on artificial blisters in organic coatings

SURFACE TREATMENTS

J. H. W. de Wit and H. J. W. Lenderink 1111 Electrochemical impedance spectroscopy as a tool to obtain mechanistic information on the passive behaviour of aluminium

I. ANNERGREN, M. KEDDAM, H. TAKENOUTI and D. THIERRY 1121 Modelling of the passivation mechanism of Fe–Cr binary alloys from *ac* impedance and frequency resolved *rrde*—I. Behaviour of Fe–Cr alloys in 0.5 M H_2SO_4

M. GABERŠČEK and S. PEJOVNIK 1137 Impedance spectroscopy as a technique for studying the spontaneous passivation of metals in electrolytes

J. PAN, D. THIERRY and C. LEYGRAF 1143 Electrochemical impedance spectroscopy study of the passive oxide film on titanium for implant application

J. DE LAET, H. TERRYN and J. VEREECKEN 1155 The use of impedance spectroscopy and optical reflection spectroscopy to study modified aluminium surfaces

CORROSION

P. ALTOÉ, G. PIMENTA, C. F. MOULIN, S. L. DÍAZ and O. R. MATTOS 1165 Evaluation of oilfield corrosion inhibitors in CO_2 containing media: A kinetic study

M. BOJINOV, I. BETOVA and R. RAICHEFF 1173 A model for the transpassivity of molybdenum in acidic sulphate solutions based on *ac* impedance measurements

O. GEBHARDT and A. HERMANN 1181 Microscopic and electrochemical impedance spectroscopy analyses of Zircaloy oxide films formed in highly concentrated LiOH solution

HER-HSIUNG HUANG, WEN-TA TSAI and JU-TUNG LEE 1191 Electrochemical behavior of the simulated heat-affected zone of A516 carbon steel in H_2S solution

M. ITAGAKI, M. TAGAKI and K. WATANABE 1201 Active dissolution mechanisms of iron using EIS with channel flow double electrode. Influences of chloride and fluoride ions

L. GARRIGUES, N. PEBERE and F. DABOSI 1209 An investigation of the corrosion inhibition of pure aluminum in neutral and acidic chloride solutions

C. GABRIELLI, M. KEDDAM, F. MINOUFLET and H. PERROT 1217 *Ac* electrogravimetry contribution to the investigation of the anodic behaviour of iron in sulfuric medium

V. POULAIN, J.-P. PETITJEAN, E. DUMONT and B. DUGNOILLE 1223 Pretreatments and filiform corrosion resistance of cataphoretic painted aluminium characterization by EIS and spectroscopic ellipsometry

F. PRUCKNER, J. THEINER, J. ERI and G. E. NAUER 1233 *In-situ* monitoring of the efficiency of the cathodic protection of reinforced concrete by electrochemical impedance spectroscopy

A. A. SAGÜÉS, S. C. KRANC and E. I. MORENO 1239 Evaluation of electrochemical impedance with constant phase angle component from the galvanostatic step response of steel in concrete

T. ZAKROCZYMSKI and J. FLIS 1245 Impedance characterization of the activation of iron surface for hydrogen entry from alkaline solution

BATTERIES—SENSORS—MOLTEN—SALTS

M. ISHIKAWA, K.-Y. OTANI, M. MORITA and Y. MATSUDA 1253 Behavior of the interface between lithium electrodes and organic electrolyte solutions

V. MANCIER, A. MÉTROT and P. WILLMANN 1259 *Ac* impedance modelling of nickel hydroxide electrodes viewed as mixed protonic–electronic conductors

X. Y. XIONG, H. VANDER POORTEN and M. CRAPPE 1267 Impedance parameters of Ni/Cd batteries—individual electrode characteristics. Application to modelling and state of charge determinations

SEMICONDUCTORS—MODIFIED ELECTRODES

L. A. DA SILVA, V. A. ALVES, M. A. P. DA SILVA, S. TRASATTI and J. F. C. BOODTS 1279 Electrochemical impedance, SEM, EDX and voltammetric study of oxygen evolution on Ir + Ti + Pt ternary-oxide electrodes in alkaline solution

M. DOLATA, P. KEDZIERZAWSKI and J. AUGUSTYNSKI — 1287 — Comparative impedance spectroscopy study of rutile and anatase TiO_2 film electrodes

S. S. KOCHA and J. A. TURNER — 1295 — Impedance analysis of surface modified $Ga_{0.5}In_{0.5}P$—Aqueous electrolyte interface

G. BARRAL, S. MAXIMOVITCH and F. NJANJO-EYOKE — 1305 — Study of electrochemically formed $Ni(OH)_2$ layers by EIS

V. P. PARKHUTIK, E. S. MATVEEVA and R. DÍAZ CALLEJA — 1313 — Impedance study of aging porous silicon films

J. A. PRINS-JANSEN, G. A. J. M. PLEVIER, K. HEMMES and J. H. W. DE WIT — 1323 — An *ac*-impedance study of dense and porous electrodes in molten-carbonate fuel cells

S. SANCHEZ, S. CASSAIGNON, J. VEDEL and H. GOMEZ MEIER — 1331 — Copper diffusion in solid copper sulfide electrode

POLYMERS—MEMBRANES

C. DESLOUIS, T. EL MOUSTAFID, M. M. MUSIANI and B. TRIBOLLET — 1343 — Mixed ionic-electronic conduction of a conducting polymer film. *Ac* impedance study of polypyrrole

E. S. MATVEEVA, R. DÍAZ CALLEJA and V. P. PARKHUTIK — 1351 — Impedance study of chemically synthesized emeraldine form of polyaniline

G. GUSMANO, A. BIANCO, G. MONTESPERELLI and E. TRAVERSA — 1359 — An EIS study of the humidity-sensitive electrical conduction of alkali-doped TiO_2 films

E. CORDRUWISCH, G. S. POPKIROV, E. TÜRK, J. THEINER and G. E. NAUER — 1369 — Redox behaviour of thin films of poly(thienylpyrrole) characterized by *in situ* measurement of high frequency resistance

M. A. VOROTYNTSEV, J. P. BADIALI and E. VIEIL — 1375 — Multi-component diffusion approach to transport across the electroactive-polymer films with two mobile charge carriers

NEW TRANSFER FUNCTIONS

O. E. BARCIA, O. R. MATTOS, N. PÉBÈRE and B. TRIBOLLET — 1385 — Anodic dissolution of metals under mass transport control

E. L'HOSTIS, C. DESLOUIS, B. TRIBOLLET and D. FESTY — 1393 — EHD and steady state measurements for characterization of transport properties in a gel layer

1401 — Future Special Issues

1403 — Papers in Press

1405 — Electrochemical Calendar

1409 — Books Received

NUMBER 9

i — ISE pages

1411 — Obituary—Yakov M. Kolotyrkin

S. S. ABD EL REHIM, E. E. FOUAD, S. M. ABD EL WAHAB and H. H. HASSAN — 1413 — Electroplating of zinc–nickel binary alloys from acetate baths

M. M. HEFNY and S. ABDEL-WANEES — 1419 — Electro-oxidation at a coated iridium electrode

M. HECHT and W. R. FAWCETT	1423	An electrochemical study of solvent–complex interactions in *trans*-1,2- diaminocyclohexane- *N*,*N*,*N*′,*N*′- tetraacetatochromate(III) and 1,2-diaminoethane-*N*- hydroxyethyl- *N*,*N*′, *N*′- triacetatochromium(III)
G. L. J. TRETTENHAHN, G. E. NAUER and A. NECKEL	1435	*In situ* external reflection absorption FTIR spectroscopy on lead electrodes in sulfuric acid
ZHAOXIANG WANG, BIYING HUANG, HONG HUANG, LIQUAN CHEN, RONGJIAN XUE and FOSONG WANG	1443	Investigation of the position of Li^+ ions in a polyacrylonitrile-based electrolyte by Raman and infrared spectroscopy
J. VAN HERLE, A. J. MCEVOY and K. RAVINDRANATHAN THAMPI	1447	A study on the $La_{1-x}Sr_xMnO_3$ oxygen cathode
E. S. NIMON and A. V. CHURIKOV	1455	Electrochemical behaviour of Li–Sn, Li–Cd and Li–Sn–Cd alloys in propylene carbonate solution
L. T. KUBOTA, F. GOUVEA, A. N. ANDRADE, B. G. MILAGRES and G. DE OLIVEIRA NETO	1465	Electrochemical sensor for NADH based on Meldola's Blue immobilized on silica gel modified with titanium phosphate
B. SCHUBERT, E. GOCKE, R. SCHÖLLHORN, N. ALONSO-VANTE and H. TRIBUTSCH	1471	*In situ* X-ray-electrochemical studies on the origin of H_2O_2 production during oxygen reduction at transition metal cluster materials
J. M. RODRÍGUEZ MELLADO and R. MARÍN GALVÍN	1479	Reorientation of adsorbed 2-mercaptopyridine *N*-oxide on mercury electrodes in the presence of Triton x-100
C. ALEMANY, J.-P. DIARD, B. LE GORREC and C. MONTELLA	1483	Electrochemical impedance spectroscopy study of silver cementation on copper
HONG WANG, LIANLIAN SUN and R. D. ARMSTRONG	1491	Measurements of diffusion coefficients of the neutral ionophores in plasticized PVC membranes using small amplitude *ac*/*dc* techniques
M. MOHAMEDI, J. BOUTEILLON and J. C. POIGNET	1495	Electrochemical impedance spectroscopy study of indium couples in LiCl–KCl eutectic at 450°C
CHI-CHANG HU and TEN-CHIN WEN	1505	Voltammetric investigation of palladium oxides III: Effects of hydration and pH on the electrocatalytic properties of Pd(IV)/Pd(II) and the reduction behaviour of palladous oxide
L. M. ABRANTES, M. C. OLIVEIRA and E. VIEIL	1515	A probe beam deflection study of the hypophosphite oxidation on a nickel electrode
N. SATO	1525	Interfacial ion-selective diffusion layer and passivation of metal anodes
L. ROQUET, E. M. BELGSIR, J.-M. LÉGER and C. LAMY	1533	Electrocatalytic oxidation of propargyl alcohol at platinum electrodes in acid medium: A kinetic study
J. C. EKLUND, F. MARKEN, D. N. WALLER and R. G. COMPTON	1541	Voltammetry in the presence of ultrasound: A novel sono-electrode geometry
JINXING JI and W. C. COOPER	1549	Nickel speciation in aqueous chloride solutions
H. TANG, A. KITANI and M. SHIOTANI	1561	Effects of anions on electrochemical formation and overoxidation of polyaniline
Short Communications		
GANG XIE and T. OKADA	1569	Pumping effects in water movement accompanying cation transport across Nafion 117 membranes

Xiao Guang Sun, Yun Qing Lin, Li Ming Ding and Xia Bin Jing	1573	Ionic conductivity of polymer gel electrolytes based on poly(polyethylene glycol dimethacrylate)
	1577	Future Special Issues
	1579	Papers in Press
	1581	Electrochemical Calendar
	1585	Books Received

NUMBER 10

	i	ISE pages
R. Mažeikienė and A. Malinauskas	1587	Electrochemical behaviour of polyaniline film polymerized by the use of a chemical oxidation step
Shaolin Mu and Jinqing Kan	1593	Evidence for the autocatalytic polymerization of aniline
A. A. Hermas and K. Ogura	1601	Effects of alloying additions on the spontaneous passivation of stainless steels containing copper at different temperatures
H. Horio, K. Momota, K. Kato, M. Morita and Y. Matsuda	1611	Electrochemical fluorination of aromatic compounds in liquid $R_4NF \cdot mHF$ part V—A study on side-reactions during the fluorination of halobenzenes
H.-W. Lei, H. Hattori and H. Kita	1619	Electrocatalysis by Pb adatoms of HCOOH oxidation at Pt(111) in acidic solution
K. A. Richardson, D. M. W. Arrigan, P. A. J. de Groot, P. C. Lanchester and P. N. Bartlett	1629	Electrodeposition of the bismuth-based superconductor $Bi_2Sr_2CaCu_2O_{8+\delta}$
Hang Shi	1633	Activated carbons and double layer capacitance
L. Veleva, P. Quintana, R. Ramanauskas, R. Pomes and L. Maldonado	1641	Mechanism of copper patina formation in marine environments
N. Hoshi, T. Suzuki and Y. Hori	1647	Step density dependence of CO_2 reduction rate on Pt(S)-[n(111) × (111)] single crystal electrodes
B. Nygård, J. Ludvik and S. Wendsjö	1655	Voltammetry of organic ditellurides in protic media. Mercury assisted chemical pre-reactions with catalytic effects
J. Ludvík and B. Nygård	1661	Electrochemistry of aromatic diselenides and ditellurides in aprotic media. Preceding formation of mercury-containing compounds
H. Karatani and T. Shizuki	1667	Luminescent electrooxidation of methanol in aqueous alkaline media
P. A. Kilmartin and G. A. Wright	1677	Photoeffects at a polyaniline film electrode
G. Faubert, G. Lalande, R. Côté, D. Guay, J. P. Dodelet, L. T. Weng, P. Bertrand and G. Dénès	1689	Heat-treated iron and cobalt tetraphenylporphyrins adsorbed on carbon black: Physical characterization and catalytic properties of these materials for the reduction of oxygen in polymer electrolyte fuel cells
L. M. Abrantes and M. C. Oliveira	1703	Progress in the understanding of the hypophosphite oxidation on nickel single crystals
Chonglun Fan and D. L. Piron	1713	Study of anomalous nickel–cobalt electrodeposition with different electrolytes and current densities

J. M. CHARLESWORTH 1721 Determination of the state-of-charge of a lead-acid battery using impedance of the quartz crystal oscillator

Short Communication
L. J. SIMPSON and C. A. MELENDRES 1727 Temperature dependence of the surface enhanced Raman spectroelectrochemistry of iron in aqueous solutions

1731 Future Special Issues

1733 Papers in Press

1735 Electrochemical Calendar

1739 Books Received

NUMBER 11/12

i ISE pages

ELECTROCHEMISTRY OF ELECTROACTIVE POLYMER FILMS

B. TRIBOLLET and M. VOROTYNTSEV 1741 Editorial

V. E. KAZARINOV and M. A. VOROTYNTSEV 1743 International workshop on electrochemistry of electroactive polymer films (WEEPF'95)

G. BIDAN 1745 Obituary—Eugène Geniès

L. M. ABRANTES and J. P. CORREIA 1747 Photoelectrochemical studies of polymer films: Poly(3-methylthiophene) and poly(3-methylthiophene)/Cu systems

V. E. KAZARINOV, V. N. ANDREEV and M. A. SPITSYN 1757 Study of the polyaniline film degradation process by radiotracer and electrochemical methods

U. BARSCH and F. BECK 1761 Anodic overoxidation of polythiophenes in wet acetonitrile electrolytes

V. BARSUKOV and S. CHIVIKOV 1773 The "capacitor" concept of the current-producing process mechanism in polyaniline-type conducting polymers

A. BENYAICH, C. DESLOUIS, T. EL MOUSTAFID, M. M. MUSIANI and B. TRIBOLLET 1781 Electrochemical properties of PANI films for different counterions in acidic pH analysed by impedance techniques

J. CAO and K. AOKI 1787 Percolation threshold potentials at quasi-static electrochemical switching of polyaniline films

I. CARELLI, I. CHIAROTTO, A. CURULLI and G. PALLESCHI 1793 Electropolymerization of hydroxybenzene and aminobenzene isomers on platinum electrodes to assemble interference-free electrochemical biosensors

C. A. FERREIRA, S. AEIYACH, J. J. AARON and P. C. LACAZE 1801 Electrosynthesis of strongly adherent polypyrrole coatings on iron and mild steel in aqueous media

V. F. IVANOV, A. A. NEKRASOV, O. L. GRIBKOVA and A. A. VANNIKOV 1811 Spectroelectrochemical, EPR and conductivity investigations of thin films of vacuum deposited polyaniline

C. EHRENBECK and K. JÜTTNER 1815 Ion conductivity and permselectivity measurements of polypyrrole membranes at variable states of oxidation

D. M. KELLY and J. G. VOS 1825 The influence of acetonitrile and methanol on the charge transport properties of $[Os(bipy)_2(PVP)_{10}Cl]Cl$ films

I. L. KOGAN, G. V. GEDROVICH, L. S. FOKEEVA and I. G. SHUNINA	1833	Electrochemical and conducting properties of polyaniline in the neutral aqueous solutions of potassium acetate and zinc salts
K. MEERHOLZ and J. HEINZE	1839	Electrochemical solution and solid-state investigations on conjugated oligomers and polymers of the α-thiophene and the *p*-phenylene series
I. NAINVILLE, A. LEMARCHAND and J. P. BADIALI	1855	Growth and morphology of thick films formed on a metallic surface
T. F. OTERO, H. GRANDE and J. RODRÍGUEZ	1863	Conformational relaxation during polypyrrole oxidation: From experiment to theory
T. F. OTERO and M. BENGOECHEA	1871	*In situ* absorption–reflection study of polypyrrole composites—Switching stability
X. REN and P. G. PICKUP	1877	Impedance spectroscopy of polypyrrole/poly(styrenesulphonate) composites. Simultaneous anion and cation transport
T. SILK and J. TAMM	1883	Voltammetric study of the influence of cations on the redox-switching process of halogenide-doped polypyrrole
G. A. TSIRLINA, O. A. PETRII and S. Yu. VASSILIEV	1887	Electrochemical fabrication and study of polymer-modified STM tips
M. E. VELA, J. L. ZUBIMENDI, P. OCÓN, P. HERRASTI, R. C. SALVAREZZA, L. VÁZQUEZ and A. J. ARVIA	1891	Structural configurations of thin dried polyaniline films on gold(111) from scanning tunneling microscopy
Yu. M. VOLFKOVICH, V. S. BAGOTZKY, T. K. ZOLOTOVA and E. Yu. PISAREVSKAYA	1905	The influence of the porous structure, microkinetics and diffusion properties on the charge–discharge behaviour of conducting polymers
M. A. VOROTYNTSEV, E. VIEIL and J. HEINZE	1913	Ionic exchange of the polypyrrole film with the PC lithium perchlorate solution during the charging process
	1921	Future Special Issues
	1923	Papers in Press
	1925	Electrochemical Calendar
	1929	Books Received

NUMBER 13

	i	ISE pages
	1931	Obituary—Charles Tobias
J. A. GARRIDO, P. L. CABOT, A. H. MOREIRA, R. M. RODRÍGUEZ, P. T. A. SUMODJO and E. PÉREZ	1933	Voltammetric study of the localized corrosion of Al–Zn–Mg alloys containing Cr and Nb in chloride solutions
S. A. ABD EL-MAKSOUD, S. TAGUCHI, T. FUKUDA and A. ARAMATA	1947	Co-underpotential deposition of copper and zinc ions on Pt(111)
A. C. TAVARES, L. BOCHATAY, M. I. DA SILVA PEREIRA and F. M. A. DA COSTA	1953	Oxygen evolution on $NiCo_{2-x}Rh_xO_4$ spinel system
A. BEWICK, V. W. JONES and M. KALAJI	1961	Spectroscopic and electrochemical properties of substituted benzophenones and their related ketyls

G. Moretti, G. Quartarone, A. Tassan and A. Zingales	1971	5-amino- and 5-chloro-indole as mild steel corrosion inhibitors in 1 N sulphuric acid
L. Sánchez, J. Peral and X. Domènech	1981	Degradation of 2,4-dichlorophenoxyacetic acid by *in situ* photogenerated Fenton reagent
A. Kunugi, K. Kuwamura, M. Inoue, Y. Kawamura and K. Abe	1987	Electrosynthesis of sulfur-containing organic compounds from allene derivatives using a sacrificial mixed sulfur/graphite electrode
A.-N. Chowdhury, Y. Harima, Y. Kunugi and K. Yamashita	1993	*p*- And *n*-type conductance of electrochemically synthesized poly(3-methylthiophene) films
K. M. Krishna, M. Sharon, M. K. Mishra and V. R. Marathe	1999	Selection of optimal mixing ratios to obtain suitable photoelectrodes from mixed semiconductors using band gap calculations
J. E. T. Andersen, M. H. Jensen, P. Møller and J. Ulstrup	2005	Perspectives for *in situ* scanning tunnel microscopic imaging of metalloproteins at HOPG surfaces
C. Locatelli and G. Torsi	2011	Simultaneous determination of metals at trace level in a multicomponent system. Application to real samples
Xiang Qin Lin and Hongqiang Zhang	2019	*In situ* external reflection FTIR spectroelectrochemical investigation of poly(*o*-phenylenediamine) film coated on a platinum electrode
T. F. Mohiuddin, R. S. Hutton and D. E. Williams	2025	Effects of electrode geometry and poisoning on image contrast in photoelectrochemical microscopy
S. Sanchez and G. S. Picard	2035	Electrochemical oxidation of a metal involving two successive charge transfer steps with adsorbed intermediate species. II—Theoretical expressions for electrochemical impedance spectra
Z. H. Gu, S. J. Xia and T. Z. Fahidy	2045	Comparison of dynamic behaviour of the anodic dissolution of copper in aqueous chloride and bromide solutions
Short Communication		
P. Shuk, K. V. Ramanujachary and M. Greenblatt	2055	Molybdenum oxide bronzes as pH sensors
	2059	Future Special Issues
	2061	Papers in Press
	2063	Electrochemical Calendar
	2067	Books Received

SPECIAL ISSUE

DOUBLE LAYER MODELING

NUMBER 14

	i	ISE pages
S. Trasatti	2069	Editorial
A. Brodsky	2071	Mesoscopic description of an electrochemical interface
A. Sanfeld and L. Lavielle	2079	Electrocapillarity of oriented molecules
S. Lamperski	2089	Semi-empirical modelling of the properties of the electrode/electrolyte interface in the presence of specific anion adsorption
S. Amokrane	2097	Microscopic description of the electrode surface and double layer capacity at the electrode/solution interface

J. Stafiej, M. Dymitrowska and J. P. Badiali	2107	Field theoretic approach of electrified interfaces
J. Ennis, S. Marčelja and R. Kjellander	2115	Effective surface charge for symmetric electrolytes in the primitive model double layer
R. Andreu, M. Molero, J. J. Calvente, C. W. Outhwaite and L. B. Bhuiyan	2125	Application of the MPB theory to the analysis of the ion-free layer thickness
E. Spohr, G. Tóth and K. Heinzinger	2131	Structure and dynamics of water and hydrated ions near platinum and mercury surfaces as studied by MD simulations
J. N. Glosli and M. R. Philpott	2145	Molecular dynamics study of interfacial electric fields
P. Nikitas	2159	A unified treatment of the equilibrium properties of electrosorbed layers composed of neutral and ionic species
U. Retter	2171	Modelling of 2D first-order phase transitions in adsorption layers at the metal/electrolyte interface
P. A. Rikvold, J. Zhang, Y.-E. Sung and A. Wieckowski	2175	Lattice-gas models of adsorption in the double layer
E. Leiva	2185	Recent developments in the theory of metal *upd*
L. Blum, D. A. Huckaby and M. Legault	2207	Phase transitions at electrode interfaces
J. W. Halley	2229	Studies of the interdependence of electronic and atomic dynamics and structure at the electrode–electrolyte interface
R. R. Nazmutdinov and M. S. Shapnik	2253	Contemporary quantum chemical modelling of electrified interfaces
C. F. Zinola and A. J. Arvia	2267	A semiempirical quantum chemistry approach to possible structures and energies of hydrogen atoms adsorbed on Pt(100) and Pt(111) clusters at a simulated Pt/aqueous electrochemical interface
S. Zurita, J. Rubio and F. Illas	2275	Active sites of Pt surfaces from *ab initio* cluster model molecular electrostatic potential maps
G. Pacchioni	2285	Halogen ions adsorption at silver and platinum surfaces: a quantum chemical study
L. K. Koopal	2293	Mineral hydroxides: from homogeneous to heterogeneous modelling
O. A. Petrii	2307	Surface electrochemistry of oxides: thermodynamic and model approaches
M. A. Vorotyntsev, A. A. Rubashkin and J. P. Badiali	2313	Potential distribution across the electroactive-polymer film between the metal and solution as a function of the film charging level
K. Aoki	2321	Theory of ion-transfer kinetics at a viscous immiscible liquid/liquid interface by means of the Langevin equation
W. Schmickler	2329	Electron and ion transfer reactions on metal electrodes
	2339	Future Special Issues
	2341	Papers in Press
	2343	Electrochemical Calendar
	2347	Books Received

NUMBER 15

	i	ISE pages
	2349	Announcement—Hellmuth Fischer Medal
C. A. MAROZZI and A. C. CHIALVO	2351	Periodic current signals of very low frequency and amplitude for real surface area measurements: (I) Theoretical analysis
C. A. MAROZZI and A. C. CHIALVO	2361	Periodic current signals of very low frequency and amplitude for real surface area measurements: (II) Application to nickel electrodes
M. C. BORGHINI, M. MASTRAGOSTINO and A. ZANELLI	2369	Reliability of lithium batteries with crosslinked polymer electrolytes
J. DAVIS, D. H. VAUGHAN and M. F. CARDOSI	2375	Enhanced incorporation of phenazine redox groups during the electropolymerisation of phenylene-1,2-diamine: application to cytochrome *c* reduction
V. S. SHARIVKER, S. K. RATKJE and B. CLEAVER	2381	Determination of the entropy of molten disodium polysulphides
A. V. TRIPKOVIĆ and K. DJ. POPOVIĆ	2385	Oxidation of methanol on platinum single crystal stepped electrodes from [110] zone in acid solution
HUAFANG ZHOU and SHAOJUN DONG	2395	Study on ferrocene derivatives diffusion dynamics in polymer electrolyte by solid-state voltammetry
P. W. CRAWFORD, E. CARLOS, J. C. ELLEGOOD, C. C. CHENG, Q. DONG, D. F. LIU and Y. L. LUO	2399	The electrochemistry of antineoplastic furanquinones: electrochemical properties of benzo[*b*]naphtho[2,3-*d*]furan-6, 11-dione derivatives
C. M. ABREU, M. IZQUIERDO, M. KEDDAM, X. R. NÓVOA and H. TAKENOUTI	2405	Electrochemical behaviour of zinc-rich epoxy paints in 3% NaCl solution
R. VIDAL and A. C. WEST	2417	High-rate dissolution of copper in cupric-sulfate electrolytes
YU-CHI CHANG	2425	A kinetic model for the anodic dissolution of zinc in alkaline electrolyte with sodium metasilicate additions
CHI S. KIM and SEUNG M. OH	2433	Enzyme sensors prepared by electrodeposition on platinized platinum electrodes
M. E. MARTINS, R. C. SALVAREZZA and A. J. ARVIA	2441	A comparative study of the early stages of mercury, cadmium, lead, silver and copper electrodeposition on columnar and smooth platinum electrodes
P. TISSOT and A. HUISSOUD	2451	Proton effects in the electrochemical behaviour of 2-ethyl-9,10-anthraquinone in the medium dimethoxyethane-tetrabutylammonium hydroxide with and without oxygen
D. KOLBE and W. VIELSTICH	2457	Adsorbate formation during the electrochemical reduction of carbon dioxide at palladium—A DEMS study
Y. CASTRILLEJO, S. PALMERO, M. A. GARCÍA, L. DEBÁN and P. SANCHEZ BATANERO	2461	Chemical and electrochemical behaviour of lead ions in the $ZnCl_2$–2NaCl mixture at 450°C
K.-L. HANRAHAN, S. M. MACDONALD and S. G. ROSCOE	2469	An electrochemical study of the interfacial and conformational behaviour of cytochrome *c* and other heme proteins
J. BARKER, R. PYNENBURG, R. KOKSBANG and M. Y. SAIDI	2481	An electrochemical investigation into the lithium insertion properties of Li_xCoO_2

Short Communication

V. JOUIKOV and L. GRIGORIEVA 2489 Competitive electrochemical thio- and selenenylation of chlorosilanes

2493 Future Special Issues

2495 Papers in Press

2497 Electrochemical Calendar

2501 Books Received

NUMBER 16

i ISE pages

I. CHIAROTTO, I. CARELLI, V. CARNICELLI, F. MARINELLI and A. ARCADI 2503 Electrochemical behaviour of $Pd^{II}(PPh_3)_2Cl_2$ in the presence of carbon monoxide and its use in the palladium-catalyzed electrochemical formylation of iodoanisole

F. DI QUARTO, S. PIAZZA, C. SUNSERI, M. YANG and S.-M. CAI 2511 Photoelectrochemical characterization of thin anodic oxide films on zirconium metal

K. IZUTSU, T. NAKAMURA, K. MIYOSHI and K. KURITA 2523 Potentiometric study of complexation and solvation of lithium ions in some solvents related to lithium batteries

Z. D. STANKOVIĆ and M. VUKOVIĆ 2529 The influence of thiourea on kinetic parameters on the cathodic and anodic reaction at different metals in H_2SO_4 solution

A. G. ANASTOPOULOS 2537 Electrosorption of neutral organic compounds from solvents of high dielectric constant. Triphenylphosphine oxide as a probe molecule

S. A. M. REFAEY 2545 The corrosion and passivation of tin in borate solutions and the effect of halide ions

V. A. MARICHEV 2551 *In situ* volt-resistometric study of adsorption and premonolayer oxidation of copper in alkaline solutions in connection with some aspects of electrocatalysis

JIAXIONG WANG and F. RICHARD KEENE 2563 Mechanism of mediation of the electrochemical oxidation of $K_4Fe(CN)_6$ at poly-[tris(3-{ω-[4-(2,2′-bipyridyl)]alkyl} thiophene)iron(II)]-film modified electrodes in aqueous solutions

E. NGAMENI, J. NGOUNE, A. NASSI, M. MEGNAMISI BELOMBE and R. ROUX 2571 Electrochemical studies and electronic spectroscopic examination of some cobaloximatic complexes based on 2,3-butanedione dioxime or dimethylglyoxime with identical or mixed axial ligands

C. S. BROSSIA and R. G. KELLY 2579 A reference electrode for use in methanol solutions

K. WANG, H. A. GASTEIGER, N. M. MARKOVIC and P. N. ROSS, JR 2587 On the reaction pathway for methanol and carbon monoxide electrooxidation on Pt–Sn alloy versus Pt–Ru alloy surfaces

Y. TAKASU, N. OHASHI, X.-G. ZHANG, Y. MURAKAMI, H. MINAGAWA, S. SATO and K. YAHIKOZAWA 2595 Size effects of platinum particles on the electroreduction of oxygen

G. PATERMARAKIS 2601 Transformation of the overall strict kinetic model governing the growth of porous anodic Al_2O_3 films on aluminium to a form applicable to the non-stirred bath film growth

S. ANTONIOU and P. NIKITAS 2613 Mixed aggregation processes at the electrified Hg-electrolyte solution interface. The case of sodium dodecylsulphate-Tween 80[R], sodium dodecylsulphate-cetyltrimethylammonium bromide and Tween 80[R]-cetyltrimethylammonium bromide co-adsorption

V. JOUIKOV and G. SALAHEEV 2623 Electrochemical silylation of phenylacetylene

A. J. MOTHEO and E. R. GONZALEZ 2631 The adsorption of dimethyl sulfoxide on mercury electrodes

J. BARKER, M. Y. SAIDI and R. KOKSBANG 2639 Differential capacity as a spectroscopic probe for the investigation of alkali metal insertion reactions

A. B. SOTO, E. M. ARCE, M. PALOMAR-PARDAVÉ and I. GONZÁLEZ 2647 Electrochemical nucleation of cobalt onto glassy carbon electrode from ammonium chloride solutions

Short Communication
H. TSUTSUMI, K. OKADA and T. OISHI 2657 Electrochemical behavior of new polyamides containing disulfide bonds and pyridine rings in organic electrolyte solution

2661 Corrigendum

2663 Future Special Issues

2665 Papers in Press

2667 Electrochemical Calendar

2671 Books Received

NUMBER 17

i ISE pages

2673 Announcement—Refereeing Policy

J. J. GARCÍA-JAREÑO, J. NAVARRO-LABOULAIS and F. VICENTE 2675 Electrochemical study of Nafion membranes/Prussian blue films on ITO electrodes

G. PISTOIA, A. ANTONINI, R. ROSATI and D. ZANE 2683 Storage characteristics of cathodes for Li-ion batteries

C. IWAKURA, H. KASUGA, I. KIM, H. INOUE and M. MATSUOKA 2691 Effect of alloy composition on electrochemical properties of the Zr-based Laves-phase hydrogen storage alloys

M. BOJINOV, I. KANAZIRSKI and A. GIRGINOV 2695 A model for surface charge-assisted barrier film growth on metals in acidic solutions based on *ac* impedance measurements

B. M. GRAFOV and B. B. DAMASKIN 2707 Theory of electrochemical faradaic impedance for mixed electrolyte solutions

L. LEGRAND, A. TRANCHANT and R. MESSINA 2715 Aluminium behaviour and stability in $AlCl_3/DMSO_2$ electrolyte

M. HACHKAR, T. NAPPORN, J-M. LÉGER, B. BEDEN and C. LAMY 2721 An electrochemical quartz crystal microbalance investigation of the adsorption and oxidation of CO on a platinum electrode

I. CITTI, O. AABOUBI, J. P. CHOPART, E. MERIENNE and A. OLIVIER 2731 Thermoelectrochemical impedance (TEC)—II. Validation for an electrochemical mass transport-controlled system by stationary and dynamic investigations

J. P. LORIMER, B. POLLET, S. S. PHULL, T. J. MASON, D. J. WALTON and U. GEISSLER 2737 The effect of ultrasonic frequency and intensity upon limiting currents at rotating disc and stationary electrodes

I. WINKLER, I. PLEVAN and V. NECHIPORUK	2743	Region of occurrence of convective cells in the Cu^{2+}/Cu electrochemical system
D. J. WALTON, L. D. BURKE and M. M. MURPHY	2747	Sonoelectrochemistry: Chlorine, hydrogen and oxygen evolution at platinised platinum
G. HERLEM, B. FAHYS, M. SZÉKELY, E. SUTTER, C. MATHIEU, M. HERLEM and J.-F. PENNEAU	2753	*n*-Butylamine as solvent for lithium salt electrolytes. Structure and properties of concentrated solutions
S. MAXIMOVITCH	2761	Influence of formation conditions on impedance properties of nickel passive layers formed in 1M KOH
A. G. M. MOSTAFA HOSSAIN, T. NAGAOKA and K. OGURA	2773	Electrocatalytic reduction of carbon dioxide by substituted pyridine and pyrazole complexes of palladium
	2781	Future Special Issues
	2783	Papers in Press
	2785	Electrochemical Calendar
	2789	Books Received

NUMBER 18

C. BARTHET and M. GUGLIELMI	2791	Aspects of the conducting properties of Nafion doped polyaniline
L. ARIES, L. ALBERICH, J. ROY and J. SOTOUL	2799	Conversion coating on stainless steel as a support for electrochemically induced alumina deposit
A. M. ROCCO, M.-A. DE PAOLI, A. ZANELLI and M. MASTRAGOSTINO	2805	An electrochromic device combining polypyrrole and WO_3—I. Liquid electrolyte
S. HOČEVAR, E. PASSALACQUA, M. VIVALDI, A. PATTI and N. GIORDANO	2817	Electrodics at gas diffusion platinum electrodes—$H_3PW_{12}O_{40}$ proton conducting liquid electrolyte interface
CHANG WOOK KIM, IN-HYEONG YEO and WOON-KIE PAIK	2829	Mechanism of the mercury beating heart: an experimental study of the electrochemical-mechanical oscillator
Z. H. GU, S. J. XIA and T. Z. FAHIDY	2837	On two control parameters of the dynamics of the anodic dissolution of copper
K. OGURA, W. LOU and M. NAKAYAMA	2849	Coloration of stainless steel at room temperature by triangular current scan method
I. NAINVILLE, A. LEMARCHAND and J.-P. BADIALI	2855	Passivation of a lithium anode: a simulation model
T. KOMURA, T. YAMAGUTI and K. TAKAHASI	2865	Impedance study of the charge transport at poly-*o*-phenylenediamine film electrodes
R. HAZARD, M. LE FLOCH and A. TALLEC	2871	Controlled potential oxidation of some arylhydrazides
V. KERTÉSZ, J. BÁCSKAI and G. INZELT	2877	Monitoring of formation and redox transformations of poly(methylene blue) films using an electrochemical quartz crystal microbalance
M. E. AHMED, M. S. IBRAHIM, Y. M. TEMERK and A. M. KAWDE	2883	Adsorption and association of xanthine in absence and presence of some divalent metal ions at the mercury/solution interface

A. Galia, G. Filardo, S. Gambino, R. Mascolino, F. Rivetti and G. Silvestri	2893	Electrochemical activation of transition metal complexes for the carbonylation of methanol to dimethylcarbonate
Mei-Xian Li, Nan-Qiang Li, Zhen-Nan Gu, Xi-Huang Zhou, Yi-Liang Sun and Yong-Qing Wu	2897	Voltammetric behavior of the C_{60}-γ-cyclodextrin inclusion complex (1:2) on *hmde* in an aqueous solution
S. Štrbac and R. R. Adžić	2903	The influence of pH on reaction pathways for O_2 reduction on the Au(100) face
C. F. Wallgren, F. H. Bark and B.-J. Andersson	2909	Electrolysis of a binary electrolyte in two-dimensional channel flow
Short Communication		
L. Tomcsányi and A. De Battisti	2917	Identification of the adsorbed intermediate of the electro-oxidation of chloride by the *cv* technique
	2921	Future Special Issues
	2923	Papers in Press
	2925	Electrochemical Calendar
	2929	Books Received
	2931	Corrigendum